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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/529,043A

DATE: 08/29/2001
TIME: 15:22:39

Input Set : A:\21437.ST25.txt
Output Set: N:\CRF3\08292001\I529043A.raw

ENTERED

5 <110> APPLICANT: Eikmanns, Bernd
7 Peters-Wendisch, Petra
9 Sahm, Hermann
13 <120> TITLE OF INVENTION: METHOD FOR MICROBIAL PRODUCTION OF AMINO ACIDS OF THE
ASPARTATE
14 AND/OR GLUTAMATE FAMILY
18 <130> FILE REFERENCE: 21437
22 <140> CURRENT APPLICATION NUMBER: 09/529,043A
24 <141> CURRENT FILING DATE: 2000-04-03
28 <160> NUMBER OF SEQ ID NOS: 2
32 <170> SOFTWARE: PatentIn version 3.0
36 <210> SEQ ID NO: 1
38 <211> LENGTH: 3728
40 <212> TYPE: DNA
42 <213> ORGANISM: Corynebacterium glutamicum
46 <400> SEQUENCE: 1
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51 ctatcacccct tggcggtctc ttgttgaag gaataattac tctagtgtcg actcacat 180
53 ctcaacgct tccagcattc aaaaagatot tggtagcaaa cgcggcgaa atcgcggtcc 240
55 gtgtttccg tgcagcactc gaaaccgggt cagccacgg agctatttac ccccggtgaag 300
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63 gtgcggaaaaa cggcattact ttatggcc caacccaga gttcttgat ctcaccgggt 540
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67 ccccgagcaa aaacatcgat gagatcgta aaagcgctga aggccagact taccatct 660
69 ttgtgaaggc agttggcggt ggtggcgac gcggtatgcg ttttggatgt tcacctgtat 720
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107 agtctttgtc tgccgaccggta gtccgttgc tgcgttgc ggcgttgc gaggccgtcg 1860
109 caaaaggctgac tccgttgc ttgtccgtgg aggcctgggg cggcgccacc tacatgtgg 1920

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111 cgatgcgttt cctctttag gatccgtggg acaggctcga cgagctgcgc gaggcgatgc 1980
 113 cgaatgtaaa cattcagatg ctgcttcgcg gcccacac cgtggatac accccgtacc 2040
 115 cagactccgt ctggcgcgcg tttgttaagg aagctgccag ctccggcgtg gacatcttcc 2100
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 159 aggagatc ctccaaacaag ggcattgttgcg cgcaccatt cgcgttgcg gtcaccgtga 3420
 161 ctgttgcgttgcg aggtgatgag gtcaaggctg gagatgcgt cgcattcatc gaggtatga 3480
 163 agatggaaagc aacaatact gtttgcgttgcg acggcaaaat cgtatcgctt gttttcctg 3540
 165 ctgcaacgaa ggtggaaagggtt ggcgacttgcg tcgtcgttgcg ttcctaaacc tttctgtaaa 3600
 167 aagccccgcg tcttcctcat ggaggaggcg gggcttttgcg ggccttgcg ggccttgcg 3660
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 171 gctcaaag 3728
 174 <210> SEQ ID NO: 2
 176 <211> LENGTH: 1140
 178 <212> TYPE: PRT
 180 <213> ORGANISM: Corynebacterium glutamicum
 184 <400> SEQUENCE: 2
 186 Met Ser Thr His Thr Ser Ser Thr Leu Pro Ala Phe Lys Lys Ile Leu
 187 1 5 10 15
 189 Val Ala Asn Arg Gly Glu Ile Ala Val Arg Ala Phe Arg Ala Ala Leu
 190 20 25 30
 192 Glu Thr Gly Ala Ala Thr Val Ala Ile Tyr Pro Arg Glu Asp Arg Gly
 193 35 40 45
 195 Ser Phe His Arg Ser Phe Ala Ser Glu Ala Val Arg Ile Gly Thr Glu
 196 50 55 60
 198 Gly Ser Pro Val Lys Ala Tyr Leu Asp Ile Asp Glu Ile Ile Gly Ala
 199 65 70 75 80
 201 Ala Lys Lys Val Lys Ala Asp Ala Ile Tyr Pro Gly Tyr Gly Phe Leu
 202 85 90 95
 204 Ser Glu Asn Ala Gln Leu Ala Arg Glu Cys Ala Glu Asn Gly Ile Thr

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205	100	105	110
207	Phe Ile Gly Pro Thr Pro Glu Val Leu Asp Leu Thr Gly Asp Lys Ser		
208	115	120	125
210	Arg Ala Val Thr Ala Ala Lys Lys Ala Gly Leu Pro Val Leu Ala Glu		
211	130	135	140
213	Ser Thr Pro Ser Lys Asn Ile Asp Glu Ile Val Lys Ser Ala Glu Gly		
214	145	150	155
216	Gln Thr Tyr Pro Ile Phe Val Lys Ala Val Ala Gly Gly Gly Arg		
217	165	170	175
219	Gly Met Arg Phe Val Ala Ser Pro Asp Glu Leu Arg Lys Leu Ala Thr		
220	180	185	190
222	Glu Ala Ser Arg Glu Ala Glu Ala Ala Phe Gly Asp Gly Ala Val Tyr		
223	195	200	205
225	Val Glu Arg Ala Val Ile Asn Pro Gln His Ile Glu Val Gln Ile Leu		
226	210	215	220
228	Gly Asp His Thr Gly Glu Val Val His Leu Tyr Glu Arg Asp Cys Ser		
229	225	230	235
231	Leu Gln Arg Arg His Gln Lys Val Val Glu Ile Ala Pro Ala Gln His		
232	245	250	255
234	Leu Asp Pro Glu Leu Arg Asp Arg Ile Cys Ala Asp Ala Val Lys Phe		
235	260	265	270
237	Cys Arg Ser Ile Gly Tyr Gln Gly Ala Gly Thr Val Glu Phe Leu Val		
238	275	280	285
240	Asp Glu Lys Gly Asn His Val Phe Ile Glu Met Asn Pro Arg Ile Gln		
241	290	295	300
243	Val Glu His Thr Val Thr Glu Glu Val Thr Glu Val Asp Leu Val Lys		
244	305	310	315
246	Ala Gln Met Arg Leu Ala Ala Gly Ala Thr Leu Lys Glu Leu Gly Leu		
247	325	330	335
249	Thr Gln Asp Lys Ile Lys Thr His Gly Ala Ala Leu Gln Cys Arg Ile		
250	340	345	350
252	Thr Thr Glu Asp Pro Asn Asn Gly Phe Arg Pro Asp Thr Gly Thr Ile		
253	355	360	365
255	Thr Ala Tyr Arg Ser Pro Gly Gly Ala Gly Val Arg Leu Asp Gly Ala		
256	370	375	380
258	Ala Gln Leu Gly Gly Glu Ile Thr Ala His Phe Asp Ser Met Leu Val		
259	385	390	395
261	Lys Met Thr Cys Arg Gly Ser Asp Phe Glu Thr Ala Val Ala Arg Ala		
262	405	410	415
264	Gln Arg Ala Leu Ala Glu Phe Thr Val Ser Gly Val Ala Thr Asn Ile		
265	420	425	430
267	Gly Phe Leu Arg Ala Leu Leu Arg Glu Glu Asp Phe Thr Ser Lys Arg		
268	435	440	445
270	Ile Ala Thr Gly Phe Ile Ala Asp His Pro His Leu Leu Gln Ala Pro		
271	450	455	460
273	Pro Ala Asp Asp Glu Gln Gly Arg Ile Leu Asp Tyr Leu Ala Asp Val		
274	465	470	475
276	480	480	480
277	Thr Val Asn Lys Pro His Gly Val Arg Pro Lys Asp Val Ala Ala Pro		
	485	490	495

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279 Ile Asp Lys Leu Pro Asn Ile Lys Asp Leu Pro Leu Pro Arg Gly Ser
 280 500 505 510
 282 Arg Asp Arg Leu Lys Gln Leu Gly Pro Ala Ala Phe Ala Arg Asp Leu
 283 515 520 525
 285 Arg Glu Gln Asp Ala Leu Ala Val Thr Asp Thr Thr Phe Arg Asp Ala
 286 530 535 540
 288 His Gln Ser Leu Leu Ala Thr Arg Val Arg Ser Phe Ala Leu Lys Pro
 289 545 550 555 560
 291 Ala Ala Glu Ala Val Ala Lys Leu Thr Pro Glu Leu Leu Ser Val Glu
 292 565 570 575
 294 Ala Trp Gly Gly Ala Thr Tyr Asp Val Ala Met Arg Phe Leu Phe Glu
 295 580 585 590
 297 Asp Pro Trp Asp Arg Leu Asp Glu Leu Arg Glu Ala Met Pro Asn Val
 298 595 600 605
 300 Asn Ile Gln Met Leu Leu Arg Gly Arg Asn Thr Val Gly Tyr Thr Pro
 301 610 615 620
 303 Tyr Pro Asp Ser Val Cys Arg Ala Phe Val Lys Glu Ala Ala Ser Ser
 304 625 630 635 640
 306 Gly Val Asp Ile Phe Arg Ile Phe Asp Ala Leu Asn Asp Val Ser Gln
 307 645 650 655
 309 Met Arg Pro Ala Ile Asp Ala Val Leu Glu Thr Asn Thr Ala Val Ala
 310 660 665 670
 312 Glu Val Ala Met Ala Tyr Ser Gly Asp Leu Ser Asp Pro Asn Glu Lys
 313 675 680 685
 315 Leu Tyr Thr Leu Asp Tyr Tyr Leu Lys Met Ala Glu Glu Ile Val Lys
 316 690 695 700
 318 Ser Gly Ala His Ile Leu Ala Ile Lys Asp Met Ala Gly Leu Leu Arg
 319 705 710 715 720
 321 Pro Ala Ala Val Thr Lys Leu Val Thr Ala Leu Arg Arg Glu Phe Asp
 322 725 730 735
 324 Leu Pro Val His Val His Thr His Asp Thr Ala Gly Gly Gln Leu Ala
 325 740 745 750
 327 Thr Tyr Phe Ala Ala Ala Gln Ala Gly Ala Asp Ala Val Asp Gly Ala
 328 755 760 765
 330 Ser Ala Pro Leu Ser Gly Thr Thr Ser Gln Pro Ser Leu Ser Ala Ile
 331 770 775 780
 333 Val Ala Ala Phe Ala His Thr Arg Arg Asp Thr Gly Leu Ser Leu Glu
 334 785 790 795 800
 336 Ala Val Ser Asp Leu Glu Pro Tyr Trp Glu Ala Val Arg Gly Leu Tyr
 337 805 810 815
 339 Leu Pro Phe Glu Ser Gly Thr Pro Gly Pro Thr Gly Arg Val Tyr Arg
 340 820 825 830
 342 His Glu Ile Pro Gly Gly Gln Leu Ser Asn Leu Arg Ala Gln Ala Thr
 343 835 840 845
 345 Ala Leu Gly Leu Ala Asp Arg Phe Glu Leu Ile Glu Asp Asn Tyr Ala
 346 850 855 860
 348 Ala Val Asn Glu Met Leu Gly Arg Pro Thr Lys Val Thr Pro Ser Ser
 349 865 870 875 880
 351 Lys Val Val Gly Asp Leu Ala Leu His Leu Val Gly Ala Gly Val Asp

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352	885	890	895
354	Pro Ala Asp Phe Ala Ala Asp Pro Gln Lys Tyr Asp Ile Pro Asp Ser		
355	900	905	910
357	Val Ile Ala Phe Leu Arg Gly Glu Leu Gly Asn Pro Pro Gly Gly Trp		
358	915	920	925
360	Pro Glu Pro Leu Arg Thr Arg Ala Leu Glu Gly Arg Ser Glu Gly Lys		
361	930	935	940
363	Ala Pro Leu Thr Glu Val Pro Glu Glu Glu Gln Ala His Leu Asp Ala		
364	945	950	955
366	Asp Asp Ser Lys Glu Arg Arg Asn Ser Leu Asn Arg Leu Leu Phe Pro		
367	965	970	975
369	Lys Pro Thr Glu Glu Phe Leu Glu His Arg Arg Arg Phe Gly Asn Thr		
370	980	985	990
372	Ser Ala Leu Asp Asp Arg Glu Phe Phe Tyr Gly Leu Val Glu Gly Arg		
373	995	1000	1005
375	Glu Thr Leu Ile Arg Leu Pro Asp Val Arg Thr Pro Leu Leu Val		
376	1010	1015	1020
378	Arg Leu Asp Ala Ile Ser Glu Pro Asp Asp Lys Gly Met Arg Asn		
379	1025	1030	1035
381	Val Val Ala Asn Val Asn Gly Gln Ile Arg Pro Met Arg Val Arg		
382	1040	1045	1050
384	Asp Arg Ser Val Glu Ser Val Thr Ala Thr Ala Glu Lys Ala Asp		
385	1055	1060	1065
387	Ser Ser Asn Lys Gly His Val Ala Ala Pro Phe Ala Gly Val Val		
388	1070	1075	1080
390	Thr Val Thr Val Ala Glu Gly Asp Glu Val Lys Ala Gly Asp Ala		
391	1085	1090	1095
393	Val Ala Ile Ile Glu Ala Met Lys Met Glu Ala Thr Ile Thr Ala		
394	1100	1105	1110
396	Ser Val Asp Gly Lys Ile Asp Arg Val Val Val Pro Ala Ala Thr		
397	1115	1120	1125
399	Lys Val Glu Gly Gly Asp Leu Ile Val Val Val Ser		
400	1130	1135	1140

VERIFICATION SUMMARY

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